

APPENDIX E

VARIANCE REPORTS



INTERNATIONAL
TECHNOLOGY
CORPORATION

Variance No: PARCEL232QXJANUARY01.VR1

Linked w/NC No: X

Date of Issue: 1/31/01

Page 1 of 1

Project Name: Fort McClellan - CK10 \ WAD11

Project Number: 796887.11020300

-Variance Report -

I. Description: (by the person identifying the change)

FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, RANGES WEST OF IRON MOUNTAIN ROAD, PARCEL 232Q-X

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed a surface soil sample, subsurface soil sample and groundwater sample at sample location HR-232QX-MW05. Sample location HR-232QX-MW05 was relocated approximately 50 feet northeast of its proposed location.

Identified by: Jeffrey Tarr, PG - IT Site Manager

Date: 1-31-01

II. Justification for Variance:

The FSSFSP proposed sample location HR-232QX-MW05 downgradient of a large pit. Sample location HR-232QX-MW05 was not advanced at its proposed location because potential unexploded ordnance (UXO) was encountered at approximately 2 feet to 4 feet below ground surface. Three offsets were attempted to collect a surface soil sample, subsurface soil sample, and install a monitoring well at sample location HR-232QX-MW05, but all attempts were unsuccessful. Therefore, a decision was made by the IT Site Manager to move sample location HR-232QX-MW05 approximately 50 feet northeast and further downgradient of the large pit. Direct-push soil samples were successfully collected for chemical analysis and a monitoring well installed at that location.

III. Applicable Document/Work Plan: (by the person identifying the change)

Final Site-Specific Field Sampling Plan, Site Specific Safety and Health Plan, and Site-Specific Unexploded Ordnance Safety Plan
Attachments: Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range, and 1950 Rocket Launcher Range, December 2000

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
3. Jeffrey Tarr, IT Site Manager
4. Randy McBride, IT QA Officer
5. Mr. Ellis Pope, US Army Corps of Engineers
6. Mr. Ross McCollum, US Army Corps of Engineers

- Signatures -

Requested by: Jeffrey Tarr, PG - IT Site Manager 3-5-01
Date

Approved by: Ellis C. Pope 3/8/01
Date

Project Manager Approval: Randy McBride 3/13/01
Date

QA Approval: Jeanne Yacoub 3/14/01
Date



INTERNATIONAL
TECHNOLOGY
CORPORATION

Variance No: PARCEL232QXFEBRUARY01.VR1

Linked w/NC No: X

Date of Issue: 2/26/01

Page 1 of 1

Project Name: Fort McClellan - CK10 \ WAD11

Project Number: 796887.11020300

-Variance Report -

I. Description: (by the person identifying the change)

FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, RANGES WEST OF IRON MOUNTAIN ROAD, PARCEL 232Q-X

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed a surface soil sample, subsurface soil sample and groundwater sample at sample location HR-232QX-MW03. Permanent residuum monitoring well HR-232QX-MW03 was moved approximately 400 feet northwest of direct-push soil boring location HR-232QX-MW03.

Identified by: Jeffrey Tarr, PG - IT Site Manager

Date: 2-26-01

II. Justification for Variance:

The FSSFSP proposed sample location HR-232QX-MW03 in the northeast section of Parcel 232QX, in a potential impact area. The permanent residuum monitoring well was not installed at its proposed location because hollow-stem auger refusal was encountered and groundwater was not present. Three attempts were made to install the monitoring well, but all attempts were unsuccessful. Therefore, a decision was made to move permanent residuum monitoring well HR-232QX-MW03 further downgradient of the impact area and approximately 400 feet northwest of the direct-push soil boring location HR-232QX-MW03. Groundwater was encountered at approximately 18 feet below land surface and the well was successfully installed. This variance will not alter the scope or intent of the Site Investigation at the Ranges West of Iron Mountain Road.

III. Applicable Document/Work Plan: (by the person identifying the change)

Final Site-Specific Field Sampling Plan, Site Specific Safety and Health Plan, and Site-Specific Unexploded Ordnance Safety Plan
Attachments: Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232QX, Washington Tank Range, and 1950 Rocket Launcher Range, December 2000.

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
3. Jeffrey Tarr, IT Site Manager
4. Randy McBride, IT QA Officer
5. Mr. Ellis Pope, US Army Corps of Engineers
6. Mr. Ross McCollum, US Army Corps of Engineers

- Signatures -

Requested by: Jeffrey Tarr, PG - IT Site Manager 3-5-01
Date

Approved by: Ellis C. Pope 3/8/01
Date

Project Manager Approval: Jeanne Yacoub 3/14/01
Date

QA Approval: Randy McBride 3/19/01
Date



INTERNATIONAL
TECHNOLOGY
CORPORATION

Variance No: PARCEL116QFEBRUARY01.VR1

Linked w/NC No: X

Date of Issue: 2/28/01

Page 1 of 1

Project Name: Fort McClellan - CK10 \ WAD11

Project Number: 796887.11020300

-Variance Report -

I. Description: (by the person identifying the change)

FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, RANGES WEST OF IRON MOUNTAIN ROAD, PARCEL 232QX

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed a surface soil sample, subsurface soil sample and groundwater sample at sample location HR-116Q-MW14. Permanent residuum monitoring well HR-116Q-MW14 was moved approximately 180 feet south \ southeast of direct-push soil boring location HR-116Q-MW14. The FSSFSP proposed using hollow-stem augers to install residuum monitoring well HR-116Q-MW14. Monitoring well HR-116Q-MW14 was installed using air rotary drilling techniques.

Identified by: Jeffrey Tarr, PG - IT Site Manager

Date: 2-28-01

II. Justification for Variance:

The FSSFSP proposed sample location HR-116Q-MW14 west of Iron Mountain Road in a potential downgradient area identified as an impact area by Explosive and Ordnance Disposal Team (EODT). The permanent residuum monitoring well was not installed at its proposed location because hollow-stem auger refusal was encountered and groundwater was not present. Three attempts were made to install the monitoring well, but all attempts were unsuccessful. Therefore, a decision was made to move permanent residuum monitoring well HR-116Q-MW14 approximately 180 feet south \ southeast of the direct-push soil boring location HR-116Q-MW14. Hollow-stem auger refusal was encountered after the well was relocated and groundwater was not present. Therefore, a decision was made by the IT Site Manager to install residuum well HR-116Q-MW14 using air rotary drilling techniques. Groundwater was encountered using air rotary drilling and the well was successfully installed. This variance will not alter the scope or intent of the Site Investigation at the Ranges West of Iron Mountain Road.

III. Applicable Document/Work Plan: (by the person identifying the change)

Final Site-Specific Field Sampling Plan, Site Specific Safety and Health Plan, and Site-Specific Unexploded Ordnance Safety Plan
Attachments: Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range, and 1950 Rocket Launcher Range, December, 2000.

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
3. Jeffrey Tarr, IT Site Manager
4. Randy McBride, IT QA Officer
5. Mr. Ellis Pope, US Army Corps of Engineers
6. Mr. Ross McCollum, US Army Corps of Engineers

- Signatures -

Requested by: Jeffrey Tarr, PG - IT Site Manager 3-5-01
Date

Approved by: Ellis C. Pope 3/8/01
Date

Project Manager Approval: Jeanne Yacoub 3/14/01
Date

QA Approval: Randy McBride 3/13/01
Date



Variance No: PARCEL232QXFEBRUARY01.VR2

Linked w/NC No: X

Date of Issue: 2/28/01

Page 1 of 1

Project Name: Fort McClellan - CK10 \ WAD11

Project Number: 796887.11020300

-Variance Report -

I. Description: (by the person identifying the change)

FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, RANGES WEST OF IRON MOUNTAIN ROAD, PARCEL 232Q-X

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed a surface soil sample, subsurface soil sample and groundwater sample at sample location HR-232QX-MW17. Permanent residuum monitoring well HR-232QX-MW17 was moved approximately 120 feet southeast of direct-push soil boring location HR-232QX-MW17.

Identified by: Jeffrey Tarr, PG - IT Site Manager

Date: 2-28-01

II. Justification for Variance:

The FSSFSP proposed sample location HR-232QX-MW17 in the eastern section of Parcel 232QX, adjacent and downgradient of an area of several large pit \ depressions. The permanent residuum monitoring well was not installed at its proposed location because hollow-stem auger refusal was encountered and groundwater was not present. Three attempts were made to install the monitoring well, but all attempts were unsuccessful. Therefore, a decision was made to move permanent residuum monitoring well HR-232QX-MW17 approximately 120 feet southeast of the direct-push soil boring location HR-232QX-MW17. Groundwater was encountered at approximately 35 feet below land surface and the well was successfully installed. This variance will not alter the scope or intent of the Site Investigation at the Ranges West of Iron Mountain Road.

III. Applicable Document/Work Plan: (by the person identifying the change)

Final Site-Specific Field Sampling Plan, Site Specific Safety and Health Plan, and Site-Specific Unexploded Ordnance Safety Plan
Attachments: Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range, and 1950 Rocket Launcher Range, December 2000

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
3. Jeffrey Tarr, IT Site Manager
4. Randy McBride, IT QA Officer
5. Mr. Ellis Pope, US Army Corps of Engineers
6. Mr. Ross McCollum, US Army Corps of Engineers

- Signatures -

Requested by: Jeffrey Tarr, PG - IT Site Manager 3-5-01 Date

Approved by: Ellis C. Pope 3/8/01 Date

Project Manager Approval: Jeanne Yacoub 3/14/01 Date

QA Approval: Randy McBride 3/19/01 Date



Variance No: PARCEL91QMARCH01.VR1

Linked w/NC No: X

Date of Issue: 3/09/01

Page 1 of 1

Project Name: Fort McClellan - CK04

Project Number: 796887.11020300

-Variance Report -

I. Description: (by the person identifying the change)

FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, RANGES WEST OF IRON MOUNTAIN ROAD, PARCEL 91Q-X

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed a surface water sample and sediment sample at sample location HR-91Q-SWSD01. Surface water and sediment were not collected at this location. A depositional soil sample HR-91Q-DEP01 was collected at this location.

Identified by: Jeffrey Tarr, PG - IT Site Manager

Date: 3-09-01

II. Justification for Variance:

The FSSFSP proposed a surface water sample and sediment sample at sample location HR-91Q-SWSD01, but was not collected because surface water and sediment were not present in the drainage creek. Several attempts were made to collect a surface water sample and sediment sample from the creek, but all attempts were unsuccessful. A depositional soil sample HR-91Q-DEP01 was collected at this location to determine the presence or absence of contamination.

III. Applicable Document/Work Plan: (by the person identifying the change)

Final Site-Specific Field Sampling Plan, Site Specific Safety and Health Plan, and Site-Specific Unexploded Ordnance Safety Plan
Attachments: Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range, and 1950 Rocket Launcher Range, December, 2000.

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
3. Jeffrey Tarr, IT Site Manager
4. Randy McBride, IT QA Officer
5. Mr. Ellis Pope, US Army Corps of Engineers
6. Mr. Ross McCollum, US Army Corps of Engineers

- Signatures -Requested by: Jeffrey Tarr, PG - IT Site Manager 3-14-01
DateApproved by: Stanley E. Sanitt (COE) 3-20-01
DateProject Manager Approval: Jeanne Yacoub 3/30/01
DateQA Approval: Randy McBride 3/21/01
Date



**INTERNATIONAL
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Variance No: PARCEL201QMARCH01.VR1

Linked w/NC No: X

Date of Issue: 3/09/01

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Project Name: **Fort McClellan – CK10**

Project Number: 796887.11020300

-Variance Report -

I. Description: (by the person identifying the change)

FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, RANGES WEST OF IRON MOUNTAIN ROAD, PARCEL 201Q

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed a surface water sample and sediment sample at sample location HR-201Q-SWSD01. Surface water and sediment were not collected at this location. A depositional soil sample HR-201Q-DEP01 was collected at this location.

Identified by: Jeffrey Tarr, PG – IT Site Manager

Date: 3-09-01

II. Justification for Variance:

The FSSFSP proposed a surface water sample and sediment sample at sample location HR-201Q-SWSD01, but was not collected because surface water and sediment were not present in the drainage creek. Several attempts were made to collect a surface water sample and sediment sample from the creek, but all attempts were unsuccessful. A depositional soil sample HR-201Q-DEP01 was collected at this location to determine the presence or absence of contamination.

III. Applicable Document/Work Plan: (by the person identifying the change)

Final Site-Specific Field Sampling Plan, Site Specific Safety and Health Plan, and Site-Specific Unexploded Ordnance Safety Plan Attachments: Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range, and 1950 Rocket Launcher Range, December, 2000.

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
3. Jeffrey Tarr, IT Site Manager
4. Randy McBride, IT QA Officer
5. Mr. Ellis Pope, US Army Corps of Engineers
6. Mr. Ross McCollum, US Army Corps of Engineers

- Signatures -

Requested by: Jeffrey Tarr, PG - IT Site Manager 3-14-01 Date

Approved by: Stanley E. Parrott (CSE) 3-20-01 Date

Project Manager Approval: Jeanne Yacoub 3/30/01 Date

QA Approval: Randy McBride 3/21/01 Date



INTERNATIONAL
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Variance No: PARCEL232Q-XMARCH01.VR1

Linked w/NC No: X

Date of Issue: 3/9/01

Page 1 of 1

Project Name: **Fort McClellan – CK04**

Project Number: 796887.11020300

-Variance Report -

I.Description: (by the person identifying the change)

FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, RANGES WEST OF IRON MOUNTAIN ROAD, PARCEL 232Q-X

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed a surface water sample and sediment sample at sample location HR-232QX-SWSD07. Surface water and sediment were not collected at this location. A depositional soil sample HR-232QX-DEP01 was collected at this location.

Identified by: Jeffrey Tarr, PG – IT Site Manager

Date: 3-09-01

II. Justification for Variance:

The FSSFSP proposed a surface water sample and sediment sample at sample location HR-232QX-SWSD07, but was not collected because surface water and sediment were not present in the drainage creek. Several attempts were made to collect a surface water sample and sediment sample from the creek, but all attempts were unsuccessful. A depositional soil sample HR-232QX-DEP01 was collected at this location to determine the presence or absence of contamination.

III. Applicable Document/Work Plan: (by the person identifying the change)

Final Site-Specific Field Sampling Plan, Site Specific Safety and Health Plan, and Site-Specific Unexploded Ordnance Safety Plan
Attachments: Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range, and 1950 Rocket Launcher Range, December, 2000.

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
3. Jeffrey Tarr, IT Site Manager
4. Randy McBride, IT QA Officer
5. Mr. Ellis Pope, US Army Corps of Engineers
6. Mr. Ross McCollum, US Army Corps of Engineers

- Signatures -

Requested by: Jeffrey Tarr, PG - IT Site Manager 3-19-01
Date

Approved by: Stanley E. Parrott (COE) 3-20-01
Date

Project Manager Approval: Jeanne Yacoub 3/30/01
Date

QA Approval: Randy McBride 3/21/01
Date



Variance No: PARCEL117QMARCH01.VR1
Linked w/NC No: X
Date of Issue:

Project Name: Fort McClellan - CK10

Project Number: 796887.11020300

- Variance Report -

I. Description: (by the person identifying the change)

FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, RANGES WEST OF IRON MOUNTAIN ROAD, PARCEL 117Q-X

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed a surface soil sample, subsurface soil sample, and groundwater sample at sample location HR-117Q-MW07. Permanent residuum monitoring well HR-117Q-MW07 was moved approximately 100 feet northwest of direct-push soil boring location HR-117Q-MW07. The FSSFSP proposed using hollow-stem augers to install residuum monitoring well HR-117Q-MW07. Monitoring well HR-117Q-MW07 was installed using air rotary drilling techniques.

Identified by: Jeffrey Tarr, PG - IT Site Manager

Date: 3-22-01

II. Justification for Variance:

The FSSFSP proposed sample location HR-117Q-MW07 at the western edge of Parcel 117Q-X, northwest of the firing line for Parcel 116Q-X. Permanent residuum monitoring well HR-117Q-MW07 was not installed at its proposed location because hollow-stem auger refusal was encountered and groundwater was not present. A decision was made to move permanent residuum monitoring well HR-117Q-MW07 approximately 100 feet northwest of the direct-push soil boring location HR-117Q-MW07. Groundwater was encountered using air rotary drilling and the well was successfully installed. This variance did not alter the scope or intent of the Site Investigation for the Ranges West of Iron Mountain Road.

III. Applicable Document/Work Plan: (by the person identifying the change)

Final Site-Specific Field Sampling Plan, Site-Specific Safety and Health Plan and Site-Specific Unexploded Ordnance Plan Attachments, Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range, and 1950 Rocket Launcher Range, December, 2000.

- Distribution List:
- 1. Jeanne Yacoub, IT Project Manager
 - 2. Steve Moran, IT Technical Lead
 - 3. Jeffrey Tarr, IT Site Manager
 - 4. Randy McBride, IT QA Officer
 - 5. Mr. Ellis Pope, US Army Corps of Engineers
 - 6. Mr. Ross McCollum, US Army Corps of Engineers

- Signatures -

Requested by: Jeffrey Tarr, PG - IT Site Manager 3-23-01 Date

Approved by: Randy A. McBride - COE 04/11/01 Date

Project Manager Approval: Jeanne Yacoub 4/18/01 Date

QA Approval: Randall L. McBride 4/18/01 Date



**INTERNATIONAL
TECHNOLOGY
CORPORATION**

Variance No: PARCEL91QMARCH01.VR1

Linked w/NC No: X

Date of Issue:

Page 1 of 1

Project Name: **Fort McClellan – CK04**

Project Number: 773191.01040200

-Variance Report -

I. Description: (by the person identifying the change)

FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, RANGES WEST OF IRON MOUNTAIN ROAD, PARCEL 91Q-X.

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed a surface soil sample, subsurface soil sample, and groundwater sample at sample location HR-91Q-MW08. The FSSFSP proposed using hollow-stem augers to install permanent residuum monitoring well HR-91Q-MW08. Monitoring well HR-91Q-MW08 was relocated approximately 60 feet east of its proposed location and installed using air rotary drilling techniques.

Identified by: **Jeffrey Tarr, PG – IT Site Manager**

Date: **3-27-01**

II. Justification for Variance:

The FSSFSP proposed sample location HR-91Q-MW08 east of the central section of Parcel 91Q-X, near Iron Mountain Road. Permanent residuum monitoring well HR-91Q-MW08 was not installed at its proposed location because hollow-stem auger refusal was encountered and groundwater was not present. A decision was made to move permanent residuum monitoring well HR-91Q-MW08 approximately 60 feet east of the proposed location. Groundwater was encountered using air rotary drilling and the well was successfully installed. This variance will not alter the scope or intent of the Site Investigation for the Ranges West of Iron Mountain Road.

III. Applicable Document/Work Plan: (by the person identifying the change)

Final Site-Specific Field Sampling Plan, Site-Specific Safety and Health Plan, and Site-Specific Unexploded Ordnance Safety Plan Attachments, Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q-X, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q-X, 232Q-X, Washington Tank Range, and 1950 Rocket Launcher Range, December 2000.

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
3. Jeffrey Tarr, IT Site Manager
4. Randy McBride, IT QA Officer
5. Mr. Ellis Pope, US Army Corps of Engineers
6. Mr. Ross McCollum, US Army Corps of Engineers

- Signatures -

Requested by: **Jeffrey Tarr, PG - IT Site Manager** **3-30-01** Date

Approved by: **Darryl A. Pettib - COE** **04/11/01** Date

Project Manager Approval: **Jeanne Yacoub** **4/16/01** Date

QA Approval: **RANDY L. MCBRIDE** **4/16/01** Date



INTERNATIONAL
TECHNOLOGY
CORPORATION

Variance No: PARCEL116QMARCH01.VR1

Linked w/NC No: X

Date of Issue:

Page 1 of 1

Project Name: Fort McClellan - CK10

Project Number: 796887.11020300

-Variance Report -

I. Description: (by the person identifying the change)

FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, RANGES WEST OF IRON MOUNTAIN ROAD, PARCEL 116Q.

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed a surface soil sample, subsurface soil sample, and groundwater sample at sample location HR-116Q-MW15. Permanent residuum monitoring well HR-116Q-MW15 was moved approximately 300 feet north of its proposed location.

Identified by: Jeffrey Tarr, PG - IT Site Manager

Date: 3-31-01

II. Justification for Variance:

The FSSFSP proposed sample location HR-116Q-MW15 approximately 1,000 feet southwest of the top of Iron Mountain in a potential impact area. The sample location was proposed on a hillside with a steep slope and rough terrain unsafe for the drill rig and direct-push rig to access. Therefore, sample location HR-116Q-MW15 was moved approximately 300 feet north of its proposed location, soil samples were successfully collected for laboratory analysis, and the monitoring well installed. This variance will not alter the scope or intent of the Site Investigation for the Ranges West of Iron Mountain Road.

III. Applicable Document/Work Plan: (by the person identifying the change)

Final Site-Specific Field Sampling Plan, Site-Specific Safety and Health Plan and Site-Specific Unexploded Ordnance Plan Attachments, Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range, and 1950 Rocket Launcher Range, December, 2000.

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
3. Jeffrey Tarr, IT Site Manager
4. Randy McBride, IT QA Officer
5. Mr. Ellis Pope, US Army Corps of Engineers
6. Mr. Ross McCollum, US Army Corps of Engineers

- Signatures -

Requested by: Jeffrey Tarr, PG - IT Site Manager 4-12-2001
Date

Approved by: Stanley E. Sanitt (USACE) 4-27-01
Date

Project Manager Approval: Jeanne Yacoub 5/9/01
Date

QA Approval: Randall L. N. 5/8/01
Date



**INTERNATIONAL
TECHNOLOGY
CORPORATION**

Variance No: PARCEL116QAPRIL01.VR1

Linked w/NC No: X

Date of Issue:

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Project Name: **Fort McClellan – CK 10 \ WAD 11**

Project Number: 796887.11020300

-Variance Report -

I.Description: (by the person identifying the change)

FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, SITE SPECIFIC SAFETY & HEALTH PLAN AND SITE SPECIFIC UNEXPLODED ORDNANCE PLAN ATTACHMENTS, RANGES WEST OF IRON MOUNTAIN ROAD, PARCEL 116Q-X, DECEMBER 2000.

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed a surface soil sample, subsurface soil sample and groundwater sample at sample location HR-116Q-MW04. Permanent residuum monitoring well HR-116Q-MW04 was moved approximately 370 feet east of direct-push soil boring location HR-116Q-MW04. The FSSFSP proposed using hollow-stem augers to install residuum monitoring well HR-116Q-MW04. Monitoring well HR-116Q-MW04 was drilled and installed using air rotary drilling methods.

Identified by: **Jeffrey Tarr, PG – IT Site Manager**

Date: 4-01-01

II. Justification for Variance:

The FSSFSP proposed sample location HR-116Q-MW04 in a location just west of a bare area seen in the 1969 aerial photograph that appears to have had much activity. Also, Explosive and Ordnance Disposal Team (EODT) identified the area as an impact area. The permanent residuum monitoring well was not installed at its proposed location because hollow-stem auger refusal was encountered and groundwater was not present. Several attempts were made to install the well, but all attempts were unsuccessful. Hollow-stem auger refusal was encountered after the well was relocated and groundwater was not present. Therefore, a decision was made by the IT Site Manager to install residuum well HR-116Q-MW04 using air rotary drilling methods. Groundwater was encountered using air rotary drilling and the well was successfully installed. This variance did not alter the scope or intent of the Site Investigation at the Ranges West of Iron Mountain Road.

III. Applicable Document/Work Plan: (by the person identifying the change)

Final Site-Specific Work Plan, Site Specific Safety & Health Plan and Site Specific Unexploded Ordnance Plan Attachments Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range and 1950 Rocket Launcher Range, December 2000.

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
3. Jeffrey Tarr, IT Site Manager
4. Randy McBride, IT QA Officer
5. Mr. Ellis Pope, US Army Corps of Engineers
6. Mr. Ross McCollum, US Army Corps of Engineers

- Signatures -

Requested by: *Jeffrey Tarr* PG - IT Site Manager **4-13-01** Date

Approved by: *Stanley E. Landt (USACE)* **4-27-01** Date

Project Manager Approval: *Jeanne Yacoub* **5/9/01** Date

QA Approval: *Randy L. McBride* **3-5-01** Date



INTERNATIONAL
TECHNOLOGY
CORPORATION

Variance No: PARCEL116QAPRIL01.VR2

Linked w/NC No: X

Date of Issue:

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Project Name: **Fort McClellan – CK10 \ WAD 11**

Project Number: 796887.11020300

-Variance Report -

I.Description: (by the person identifying the change)

FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, SITE SPECIFIC SAFETY & HEALTH PLAN AND SITE SPECIFIC UNEXPLODED ORDNANCE PLAN ATTACHMENTS , RANGES WEST OF IRON MOUNTAIN ROAD, PARCEL 116Q-X, DECEMBER 2000.

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed a surface soil sample, subsurface soil sample and groundwater sample at sample location HR-116Q-MW07. Permanent residuum monitoring well HR-116Q-MW07 was moved approximately 15 feet east of the direct-push soil boring location HR-116Q-MW07. The FSSFSP proposed using hollow stem augers to install residuum monitoring well HR-116Q-MW07. Monitoring well HR-116Q-MW07 was drilled and installed using air rotary drilling methods.

Identified by: Jeffrey Tarr, PG – IT Site Manager

Date: 4-01-01

II. Justification for Variance:

The FSSFSP proposed sample location HR-116Q-MW07 in a location approximately 1,200 feet northeast of the main firing line for Parcel 116Q-X in a probable impact area with several large trenches. The permanent residuum monitoring well was not installed using hollow-stem augers because refusal was encountered and groundwater was not present. Therefore, a decision was made by the IT Site Manager to install residuum well HR-116Q-MW07 using air rotary drilling methods. Groundwater was encountered using air rotary drilling and the well was successfully installed approximately 15 feet east of the direct-push soil boring location HR-116Q-MW07. This variance will not alter the scope or intent of the Site Investigation at the Ranges West of Iron Mountain Road.

III. Applicable Document/Work Plan: (by the person identifying the change)

Final Site-Specific Work Plan, Site Specific Safety & Health Plan and Site Specific Unexploded Ordnance Plan Attachments Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range and 1950 Rocket Launcher Range, December 2000.

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
3. Jeffrey Tarr, IT Site Manager
4. Randy McBride, IT QA Officer
5. Mr. Ellis Pope, US Army Corps of Engineers
6. Mr. Ross McCollum, US Army Corps of Engineers

- Signatures -

Requested by: Jeffrey Tarr, PG - IT Site Manager 4-13-01 Date

Approved by: Stanley E. Smith (USACE) 4-27-01 Date

Project Manager Approval: Jeanne Yacoub 5/9/01 Date

QA Approval: Randy McBride 5/8/01 Date



Variance No: PARCEL151QAPRIL01.VR1

Linked w/NC No: X

Date of Issue: 4/11/01

Page _1 of 1__

Project Name: Fort McClellan - CK10 \ WAD11

Project Number: 796887.11020300

-Variance Report -

I. Description: (by the person identifying the change)

FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, RANGES WEST OF IRON MOUNTAIN ROAD, PARCEL 151Q

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed a surface soil sample and subsurface soil sample at sample locations HR-151Q-GP02 and HR-151Q-GP03 using direct-push technology. The soil samples were collected using a stainless steel hand auger.

Identified by: Jeffrey Tarr, PG - IT Site Manager

Date: 4-11-01

II. Justification for Variance:

The direct-push drill rig could not access proposed sample locations HR-151Q-GP02 and HR-151Q-GP03. These two sample locations were proposed on either a hillside with a steep slope or rough terrain unsafe for the direct-push drill rig to access. Therefore, the IT Site Manager made a decision to collect the soil samples using a hand auger. This variance will not alter the scope or intent of the Site Investigation at the Ranges West of Iron Mountain Road.

III. Applicable Document/Work Plan: (by the person identifying the change)

Final Site-Specific Field Sampling Plan, Site Specific Safety and Health Plan, and Site-Specific Unexploded Ordnance Safety Plan
Attachments: Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range, and 1950 Rocket Launcher Range, December, 2000.

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
3. Jeffrey Tarr, IT Site Manager
4. Randy McBride, IT QA Officer
5. Mr. Ellis Pope, US Army Corps of Engineers
6. Mr. Ross McCollum, US Army Corps of Engineers

- Signatures -

Requested by: Jeffrey Tarr, PG - IT Site Manager 4-11-2001

Date

Approved by: Randy McBride - COE 04/11/01

Date

Project Manager Approval: Jeanne Yacoub 4/18/01

Date

QA Approval: Randy L. McBride 4/16/01

Date



**INTERNATIONAL
TECHNOLOGY
CORPORATION**

Variance No: RWIMRPARCELS 73Q, 91Q, 116Q,
194(7), 228Q, 229Q-X, 231Q
AND 232QX AUGUST01.VR1

Linked w/NC No: X

Date of Issue: 8/20/01

Page 1 **of** 1

Project Name: Fort McClellan - CK05 Modification

Project Number: 774645.01320300

- Variance Report -

I. Description: (by the person identifying the change)

FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, RANGES WEST OF IRON MOUNTAIN ROAD, PARCELS 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, WASHINGTON TANK RANGE, AND 1950 ROCKET LAUNCHER RANGE.

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed seventy-six groundwater samples for chemical analysis. Groundwater samples were not collected from monitoring wells HR-73Q-MW01, HR-73Q-MW04, HR-116Q-MW04, HR-116Q-MW11, HR-116Q-MW14 and HR-228Q-MW01.

Identified by: Jeffrey Tarr, PG - IT Site Manager

Date: 8-20-01

II. Justification for Variance:

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed seventy-six groundwater samples for chemical analysis. During drilling and monitoring well installation activities, groundwater was encountered at six monitoring well locations HR-73Q-MW01, HR-73Q-MW04, HR-116Q-MW04, HR-116Q-MW11, HR-116Q-MW14 and HR-228Q-MW01. However, during subsequent sampling activities groundwater was not present. Several attempts were made to collect a groundwater sample from the wells, but all attempts were unsuccessful because the wells were dry. Currently, these six wells are being monitored for the presence of groundwater. Should any of these six wells contain groundwater, samples will be collected for chemical analysis.

III. Applicable Document/Work Plan: (by the person identifying the change)

Final Site-Specific Field Sampling Plan, Site Specific Safety and Health Plan, and Site-Specific Unexploded Ordnance Safety Plan Attachments Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range and 1950 Rocket Launcher Range, December 2000.

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
3. Jeffrey Tarr, IT Site Manager
4. Randy McBride, IT QA Officer
5. Mr. Ellis Pope, US Army Corps of Engineers
6. Mr. Ross McCollum, US Army Corps of Engineers

- Signatures -

Requested by: Jeffrey Tarr, PG - IT Site Manager **8-21-2001**
Date

Approved by: Randy E. Smith **8-22-01**
Date

Project Manager Approval: Jeanne Yacoub **8/20/01**
Date

QA Approval: Randy L. Pope **8/23/01**
Date



INTERNATIONAL
TECHNOLOGY
CORPORATION

Variance No: RWIMRPARCELS 91Q, 116Q, 194(7),
229Q-X, 231Q AND 232QX
AUGUST01.VR2

Linked w/NC No: x

Date of Issue: 8/20/01

Page 1 of 1

Project Name: Fort McClellan - CK 10 \ WAD 11

Project Number: 774645.11020300

-Variance Report -

I. Description: (by the person identifying the change)

FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, RANGES WEST OF IRON MOUNTAIN ROAD, PARCELS 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, WASHINGTON TANK RANGE, AND 1950 ROCKET LAUNCHER RANGE.

The Final Site-Specific Field Sampling Plan proposed collection of seventy-six groundwater samples for chemical analysis. Groundwater samples were not collected from monitoring wells HR-91Q-MW02, HR-91Q-MW05, HR-116Q-MW01, HR-116Q-MW09, HR-116Q-MW10, HR-116Q-MW12, HR-116Q-MW13, HR-116Q-MW15, HR-229Q-MW01, HR-231Q-MW01, HR-232QX-MW12, HR-232QX-MW13, HR-194-MW01, HR-194-MW02 and HR-194-MW03.

Identified by: Jeffrey Tarr, PG - IT Site Manager

Date: 8-20-01

II. Justification for Variance:

During drilling and monitoring well installation activities competent bedrock was encountered, but groundwater was not present. Based upon previous drilling and well installation activities at Fort McClellan, groundwater tends to migrate along the soil \ bedrock interface. Therefore, a decision was made to install these wells on top of competent bedrock with the intent of having groundwater enter the well screen during periods of heavy rainfall. To date, groundwater has been present in some of the wells. However, there has not been enough groundwater in the wells to collect samples. Currently, these fifteen wells are being monitored for the presence of groundwater. Should any of these fifteen wells contain groundwater, samples will be collected for chemical analysis.

III. Applicable Document/Work Plan: (by the person identifying the change)

Final Site-Specific Field Sampling Plan, Site Specific Safety and Health Plan, and Site-Specific Unexploded Ordnance Safety Plan Attachments Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range and 1950 Rocket Launcher Range, December 2000.

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
3. Jeffrey Tarr, IT Site Manager
4. Randy McBride, IT QA Officer
5. Mr. Ellis Pope, US Army Corps of Engineers
6. Mr. Ross McCollum, US Army Corps of Engineers

- Signatures -

Requested by: Jeffrey Tarr, PG - IT Site Manager 8-27-2001
Date

Approved by: [Signature] 9/6/01
Date

Project Manager Approval: [Signature] 9/11/01
Date

QA Approval: [Signature] 9-10-01
Date



**INTERNATIONAL
TECHNOLOGY
CORPORATION**

Variance No: RWIMRPARCELS 73Q, 91Q, 116Q,
194(7), 228Q, 229Q-X, 231Q
AND 232QX AUGUST01.VR3

Linked w/NC No: X

Date of Issue: 8/20/01

Page 1 **of** 1

Project Name: Fort McClellan - CK05 Modification

Project Number: 774645.01320300

-Variance Report -

I. Description: (by the person identifying the change)

FINAL SITE-SPECIFIC FIELD SAMPLING PLAN, RANGES WEST OF IRON MOUNTAIN ROAD, PARCELS 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, WASHINGTON TANK RANGE, AND 1950 ROCKET LAUNCHER RANGE.

The Final Site-Specific Field Sampling Plan (FSSFSP) proposed using hollow-stem augers to install residuum monitoring wells HR-91Q-MW03, HR-91Q-MW04, HR-116Q-MW05, HR-181-MW01 and HR-232QX-MW15. These five wells were installed using air-rotary drilling techniques.

Identified by: Jeffrey Tarr, PG - IT Site Manager

Date: 8-20-01

II. Justification for Variance:

The FSSFSP proposed drilling with hollow-stem augers at permanent residuum monitoring well locations HR-91Q-MW03, HR-91Q-MW04, HR-116Q-MW05, HR-181-MW01 and HR-232QX-MW15. However, hollow-stem auger refusal was encountered prior to reaching groundwater. Several attempts were made to install the five monitoring wells, but all attempts were unsuccessful. Therefore, a decision was made by the IT Site Manager to install residuum wells HR-91Q-MW03, HR-91Q-MW04, HR-116Q-MW05, HR-181-MW01 and HR-232QX-MW15 using air-rotary drilling techniques. Groundwater was encountered during air-rotary drilling and the wells were successfully installed. This variance will not alter the intent of the Site Investigation for the Ranges West of Iron Mountain Road.

III. Applicable Document/Work Plan: (by the person identifying the change)

Final Site-Specific Field Sampling Plan, Site Specific Safety and Health Plan, and Site-Specific Unexploded Ordnance Safety Plan Attachments Ranges West of Iron Mountain Road, Parcels 181(7), 194(7), 518(7), 73Q-X, 91Q-X, 114Q-X, 115Q, 116Q-X, 117Q-X, 129Q-X, 151Q, 200Q, 201Q, 228Q, 229Q-X, 231Q, 232Q-X, Washington Tank Range and 1950 Rocket Launcher Range, December 2000.

Distribution List:

1. Jeanne Yacoub, IT Project Manager
2. Steve Moran, IT Technical Lead
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4. Randy McBride, IT QA Officer
5. Mr. Ellis Pope, US Army Corps of Engineers
6. Mr. Ross McCollum, US Army Corps of Engineers

- Signatures -

Requested by: Jeffrey Tarr, PG - IT Site Manager **8-21-2001**
Date

Approved by: Stanley E. Smith **8-22-01**
Date

Project Manager Approval: Jeanne Yacoub **8/20/01**
Date

QA Approval: Randy L. McBride **8/23/01**
Date